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Period 1

**Main Idea**:

In series and parallel circuits, voltage is the result of current multiplied by resistance

The formula for voltage is

Remember that the units for resisters are Ohms Ω, V for voltage and Amps for current.

Also remember that:

I = Vsource

Req

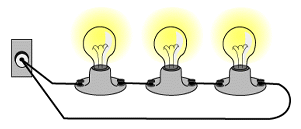
For Series circuits: Req = RA + RB +…

For Parallel circuits: Req = 1 + 1 + to the power of -1

RA RB

**Example #1**: Solve for the Req

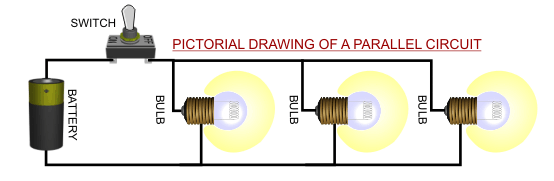
Series Circuit



Each resister (light bulb) is 10 Ohms. The socket’s voltage is 30V.

10 + 10 +10 = 30

Req = 30Ω



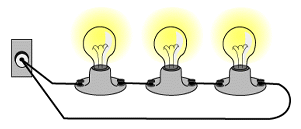
Each Resister is 10 Ohms. The battery’s voltage is 30

1 1 1 -1

10 + 10 + 10 = .001 = 1000Ω

Req = 1000Ω

**Example #2**: Solve for the Current (I) if Req = 40Ω and Vsource = 120V



120

40 = 30Amps

I = 30Amps

**Additional Resources**:

http://www.technologystudent.com/elec1/prcir1.htm

http://cipco.apogee.net/foe/fcsps.asp